Claims

We claim:

1. A medium, configured to perform:

displaying a first node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first node;

displaying the plurality of function type options for the first node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

associating the determined program instructions with the first node;

wherein, when the first node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

2. The medium of claim 1,

wherein the first node has a first node icon which is displayed in the graphical program, wherein the first node icon has a first appearance;

wherein the medium is further configured to perform:

changing the first node icon to a second appearance based on the second user input.

3. The medium of claim 1,

wherein said changing the first node icon to a second appearance comprises replacing the first node icon with a second node icon.

4. The medium of claim 1, wherein, prior to said associating the determined program instructions with the first node, the first node does not have any associated program instructions.

5. The medium of claim 1,

wherein, prior to said associating the determined program instructions with the first node, the first node is of a default function type of the plurality of function type options, wherein the first node has associated default program instructions in accordance with the default function type, and the wherein the default program instructions implement a first functionality; and

wherein said associating the determined program instructions with the first node comprises replacing the default program instructions with the determined program instructions.

6. The medium of claim 1,

wherein said receiving first user input comprises receiving the first user input to the first node; and

wherein said receiving second user input comprises receiving the second user input to the first node.

7. The medium of claim 1, wherein, prior to said associating, the first node comprises one of:

a generic read node;

a generic write node; and

a generic channel creation node.

8. The medium of claim 7, wherein, after said associating, the first node comprises one of:

a specific read node in accordance with the specified function type;

a specific write node in accordance with the specified function type; and

a specific channel creation node in accordance with the specified function type.

9. The medium of claim 1, prior to said associating, the first node comprises one of:

a generic timing node; and

a generic triggering node.

10. The medium of claim 9, wherein, after said associating, the first node comprises one of:

a specific timing node in accordance with the specified function type; and

a specific triggering node in accordance with the specified function type.

11. The medium of claim 1,

wherein, prior to said associating, the first node comprises a generic read node; and

wherein, after said associating, the first node comprises a specific read node in accordance with the specified function type.

12. The medium of claim 1,

wherein, prior to said associating, the first node comprises a generic write node; and

wherein, after said associating the first node comprises a specific write node in accordance with the specified function type.

13. The medium of claim 1,

wherein, prior to said associating, the first node comprises a generic channel creation node; and

wherein, after said associating the first node comprises a specific channel creation node in accordance with the specified function type.

14. The medium of claim 1,

wherein said determining program instructions based on the second user input comprises:

determining a second node based on the specified function type, wherein the second node comprises the determined program instructions;

wherein said associating the determined program instructions with the first node comprises:

replacing the first node in the graphical program with the second node, wherein the second node is operable to provide functionality for the graphical program in accordance with the specified function type.

15. The method of claim 14,

wherein the first node comprises a first node icon, and wherein said displaying the first node comprises displaying the first node icon.

16. The medium of claim 15,

wherein the second node comprises:

the first node icon; and

the determined program instructions;

17. The medium of claim 15,

wherein the second node comprises:

a second node icon; and

the determined program instructions;

18. The medium of claim 14, wherein the second node is polymorphic.

19. The medium of claim 14, wherein the second node is function type-switchable.

20. The medium of claim 14,

wherein the first node comprises one of:

a generic read node;

a generic write node; and

a generic channel creation node; and

wherein the second node comprises one of:

a specific read node in accordance with the specified function type;

a specific write node in accordance with the specified function type; and

a specific channel creation node in accordance with the specified function type.

21. The medium of claim 14,

wherein the first node comprises one of:

a generic timing node; and

a generic triggering node; and

wherein the second node comprises one of:

a specific timing node in accordance with the specified function type; and

a specific triggering node in accordance with the specified function type.

22. The medium of claim 14,

wherein the first node comprises a generic read node; and

wherein the second node comprises a specific read node in accordance with the specified function type.

23. The medium of claim 14,

wherein the first node comprises a generic write node; and

wherein the second node comprises a specific write node in accordance with the specified function type.

24. The medium of claim 14,

wherein the first node comprises a generic channel creation node; and

wherein the second node comprises a specific channel creation node in accordance with the specified function type.

25. The medium of claim 14,

wherein the first node comprises a generic timing node; and

wherein the second node comprises a specific timing node in accordance with the specified function type.

26. The medium of claim 14,

wherein the first node comprises a generic triggering node; and

wherein the second node comprises a specific triggering node in accordance with the specified function type.

27. The medium of claim 1, wherein the first node is polymorphic.

28. The medium of claim 1, wherein the first node is function type-switchable.

29. The method of claim 1, wherein the first node is function class-switchable.

30. The method of claim 1, wherein the medium is further configured to perform:

receiving user input selecting the first node, wherein said displaying the first node in the graphical program is performed in response to said receiving user input selecting the first node.

31. The medium of claim 1, wherein the medium comprises a carrier medium.

32. The medium of claim 1, wherein the medium comprises a programmable hardware element.

33. A medium, configurable to perform:

displaying a first read node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first read node;

displaying the plurality of function type options for the first read node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

associating the determined program instructions with the first read node;

wherein, when the first read node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

34. A medium, configurable to perform:

displaying a first write node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first write node;

displaying the plurality of function type options for the first write node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

associating the determined program instructions with the first write node;

wherein, when the first write node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

35. A medium, configurable to perform:

displaying a first channel creation node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first channel creation node;

displaying the plurality of function type options for the first channel creation node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

associating the determined program instructions with the first channel creation node;

wherein, when the first channel creation node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

36. A graphical program node, comprising:

a node icon operable to be displayed on a display; and

first program instructions associated with the node icon, wherein the first program instructions are executable to implement:

displaying a plurality of function type options for the first node in response to received user input; and

configuring the graphical program node with second program instructions, wherein the second program instructions are based on second user input to the first node specifying a function type from the plurality of function type options;

wherein, after said configuring, the graphical program node is executable in a graphical program to perform a specific functionality in accordance with the specified function type.

37. A carrier medium which stores program instructions executable to perform:

displaying a first node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first node;

displaying the plurality of function type options for the first node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining a second node based on the specified function type; and

replacing the first node in the graphical program with the second node, wherein the second node is operable to provide functionality for the graphical program in accordance with the specified function type.

38. A graphical program node, comprising:

a node icon operable to be displayed on a display;

first program instructions associated with the node icon, wherein the first program instructions are executable to implement:

displaying a plurality of function type options for the first node in response to received user input;

selecting second program instructions based on second user input to the first node specifying a function type from the plurality of function type options, wherein the second program instructions implement a functionality in accordance with the specified function type; and

associating the second program instructions with the node icon;

wherein, after said associating, the graphical program node is executable in a graphical program to perform the functionality.

39. A system for configuring a graphical program node, comprising:

means for displaying a first node in a graphical program;

means for receiving first user input invoking display of a plurality of function type options for the first node;

means for displaying the plurality of function type options for the first node in response to the first user input;

means for receiving second user input specifying a function type from the plurality of function type options;

means for determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

means for associating the determined program instructions with the first node;

wherein, when the first node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

40. A method for configuring a graphical program node, comprising:

displaying a first node in a graphical program;

receiving first user input invoking display of a plurality of function type options for the first node;

displaying the plurality of function type options for the first node in response to the first user input;

receiving second user input specifying a function type from the plurality of function type options;

determining program instructions based on the second user input, wherein the determined program instructions are executable to provide functionality in accordance with the specified function type; and

associating the determined program instructions with the first node;

wherein, when the first node executes in the graphical program, the determined program instructions are operable to execute to provide the functionality in accordance with the specified function type.

41. The method of claim 40,

wherein said receiving first user input comprises receiving the first user input to the first node; and

wherein said receiving second user input comprises receiving the second user input to the first node.

42. The method of claim 40, wherein the first node comprises one of:

a polymorphic read node;

a polymorphic write node; and

a polymorphic channel creation node.